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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,804	01/10/2005	Jens Pollmann-Retsch	DE 020173	9925

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EXAMINER	
WALFORD, NATALIE K	

ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 11/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/520,804	POLLMANN-RETSCH ET AL.	
	Examiner	Art Unit	
	Natalie K. Walford	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 September 2006*.

2a)☒ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

The Amendment, filed on September 11, 2006, has been entered and acknowledged by the Examiner. Newly added claims 10-15 has been entered. Claims 1-15 are pending in the instant application.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on October 13, 2005 has been considered by the examiner. Another copy has been provided for Applicant's record.

Claim Objections

Claim 7 and 8 are objected to because of the following informalities:

Claim 7 recites the limitation "the discharge vessel" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim. The Examiner notes that the Applicant has changed the wrong "discharge vessel".

Claim 8 recites the limitation "the velocity" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakugi (JP 05-054862).

Regarding claim 1, Sakugi discloses a discharge lamp having a reflector and cooling means in figure 1, which cooling means has at least one nozzle (item 5 and 9) through which a flow of gas can be directed onto the discharge lamp, wherein the at least one nozzle is arranged such that it does not extend, at least to any substantial degree, into a beam path produced by the lamp (item 1) and the reflector (item 7).

Regarding claim 2, Sakugi discloses a discharge lamp as claimed in claim 1, wherein the at least one nozzle is inserted in a hole in the reflector (FIG. 1).

Regarding claim 3, Sakugi discloses a discharge lamp as claimed in claim 1, wherein the velocity of the flow of gas emerging from the at least one nozzle is of a value such that a turbulent flow (paragraph 11) is produced that surrounds at least part of the lamp.

Claims 10-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lapatovich et al. (US 6,016,031).

Regarding claim 10, Lapatovich discloses a discharge lamp in figure 3 comprising a discharge element (middle area not labeled); a reflector about the discharge element for producing a beam path toward an exit window (column 3, lines 37-41); cooling means, comprising at least one nozzle (item 40) arranged at the exterior of the reflector and having an opening at the boundary of the reflector inside the lamp, the nozzle pointing toward the discharge

element, but not parallel to an axis of symmetry created by the discharge element and a neck of the reflector (see FIG. 3).

Regarding claim 11, Lapatovich discloses the lamp of claim 10 comprising at least one second nozzle (item 40), also having an opening at the boundary of the reflector inside the lamp, pointing toward the discharge element (see FIG. 3), but not parallel to the axis, the second nozzle forming an angle with respect to the first nozzle such that a turbulent flow is produced around the discharge element (column 3, lines 37-41).

Regarding claim 12, Lapatovich discloses the lamp of claim 10, wherein the nozzle is arranged perpendicular to the beam path (see FIG. 3). The Examiner notes that figure 3 is a bottom view of lamp. The light would be projected into the page, which is perpendicular to the nozzle.

Regarding claim 13, Lapatovich discloses the lamp of claim 10, comprising, at least first and second nozzles arranged approximately opposite each other across the axis (see FIG. 3, items 40).

Regarding claim 14, Lapatovich discloses the lamp of claim 10, wherein the nozzle is arranged near the exit window and pointing back approximately toward a neck of the reflector (see FIG. 3).

Regarding claim 15, Lapatovich discloses the lamp of claim 10, wherein the nozzle is not arranged in a neck of the reflector (see FIG. 3). The Examiner notes that the nozzles are not formed at the very base of the reflector, but a little above the base.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakugi (JP 05-054862).

Regarding claim 4, Sakugi discloses a discharge lamp as claimed in claim 1, but does not expressly disclose that at least two nozzles are at an angle to one another are directed at the discharge lamp such that a turbulent flow is produced that surrounds at least part of the lamp, as claimed by Applicant. Sakugi does disclose that one nozzle can be for cooling and ventilating the front of the arc tube, without degrading the color property (paragraphs 8-9). Furthermore, it is known in the art to use more than one nozzle for providing more cooling and preventing hot spots. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have more than one nozzle, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art.

Regarding claim 5, Sakugi discloses a discharge lamp as claimed in claim 4, wherein the nozzles are at an angle of approximately 90° to one another (FIG. 1).

Regarding claim 7, Sakugi discloses a discharge lamp as claimed in claim 1, wherein at least one first nozzle (items 5 and 9) is directed at a region of the discharge vessel that is at the top in the position in which the discharge lamp is operating (FIG. 1), but does not expressly disclose that at least one second-nozzle is directed at a region of the discharge vessel that is at the bottom in this same operating position, as claimed by Applicant. Sakugi does disclose that one

nozzle can be for cooling and ventilating the front of the arc tube, without degrading the color property (paragraphs 8-9). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have more than one nozzle at the bottom of the reflector in the same operating position as the first nozzle, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art.

Regarding claim 8, Sakugi discloses a discharge lamp as claimed in claim 7, wherein the velocity of the flow of gas passing through at least one of the nozzles (items 5 and 9) can be controlled as a function of the operating position of the discharge lamp (FIG. 1).

Claim 6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakugi (JP 05-054862) in view of Kaneko et al. (JP 10-125287).

Regarding claim 6, Sakugi discloses a discharge lamp as claimed in claim 1, but does not expressly disclose that a first sensor is arranged adjacent to at least one of the nozzles to sense the velocity and/or the pressure and/or the flow-rate of a flow of gas passing through the nozzle, as claimed by Applicant. Kaneko is cited to show a discharge lamp in figures 1 and 5, with a first sensor (item 25) arranged adjacent to at least one of the nozzles (item 19) to sense the velocity and/or the pressure and/or the flow-rate of a flow of gas passing through the nozzle. Kaneko teaches that the lamp cooling means can help control the luminescence properties, aging is decreased, and controlling vapor pressure properties (paragraph 7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Saluki's invention to include a first sensor arranged adjacent to at least one of the nozzles to sense the velocity and/or the pressure and/or the flow-rate of a

flow of gas passing through the nozzle, as suggested by Kaneko for controlling the luminescence properties, decreasing aging, and controlling vapor pressure properties.

Regarding claim 9, Sakugi discloses a discharge lamp as claimed in claim 7, but dos not expressly disclose that a second sensor is provided to sense the operating position of the discharge lamp and to control the velocity of the flow of gas passing through at least one of the nozzles as a function of the operating position, as claimed by Applicant. Kaneko is cited to show a discharge lamp in figures 1 and 5, with a second sensor (item 25) is provided to sense the operating position of the discharge lamp (item 17) and to control the velocity of the flow of gas passing through at least one of the nozzles (item 19) as a function of the operating position. Kaneko teaches that the lamp cooling means can help control the luminescence properties, aging is decreased, and controlling vapor pressure properties (paragraph 7).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sakugi's invention to include a second sensor provided to sense the operating position of the discharge lamp and to control the velocity of the flow of gas passing through at least one of the nozzles as a function of the operating position, as suggested by Kaneko for controlling the luminescence properties, decreasing aging, and controlling vapor pressure properties.

Response to Arguments

Applicant's arguments filed September 11, 2006 have been fully considered but they are not persuasive. The Examiner respectfully disagrees with Applicant's arguments. Regarding claim 1, the Examiner points to figure 1 of Sakugi. Nowhere does it show the nozzle extending

into the beam path produced by the lamp. The nozzle of figure 1 is barely into the reflector and does not extend the length of the arc tube. Hence, the nozzle is not is the beam path of the lamp. Regarding claim 3, the Examiner points to paragraph 11 of Sakugi. Cooling air is supplied from the nozzle duct and connected to the *blast nozzle*. The blast nozzle ventilates the cooling air towards the arc tube upper part. The flow of the air is not stagnant or calm; it is more of turbulent blast of cooling air. The air from the nozzle is turbulent because it is being blasted from the nozzle. Regarding claim 4, the Examiner notes that it would still be obvious to use more than one nozzle for better flow of the cooling air. The more nozzles, the cooler the lamp can become. Furthermore, it is well known in the art to provide more than one nozzle to help cool quicker and to prevent hot spots. Regarding Applicant's traversal of the combined reference of Sakugi and Kaneko, the Examiner respectfully disagrees. Kaneko has a nozzle (item 19) and a sensor (item 25). Kaneko teaches that the lamp cooling means can help control the luminescence properties, aging is decreased, and controlling vapor pressure properties.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkw

4/9/06

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